APPENDIX D

Summary of Potential Occurrence of Special Status Plant Species for Monument Butte Project Area

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Species	Status[1]	Habitat Association	Potential for Occurrence Within the Proposed Monument Butte Project Area and Cumulative Effects Area	Eliminated From Detailed Analysis? (Yes/No)
Plants				
Ackerman's frasera *Frasera ackermaniae*	S	Clay semi-barrens on the Chinle Formation with scattered *Juniperus osteosperma*; 5,830 to 6,000 feet; flowers June.	None. Species is endemic to a 40 acre area in northern Uintah County	Yes. Species range is outside of Project Area.
Barneby's catseye *Cryptantha barnebyi*	S	White, semi-barren shale knolls of the Green River Formation; oil shale; gently sloping white shale barrens; shadscale-saltbush or pinyon-juniper communities; 6,000-7,900 feet.	Moderate. Formation and associated soils occur in the Project Area. However, little is known about the species' exact habitat requirements	No. Potential habitat occurs in the Project Area.
Barnaby's ridgecress *Lepidium barnebyanum*	E	Tribal lands in Duchesne County. Tavaputs Plateau; Uinta Formation; white shale ridgecrests; pinyon-juniper community; 6,200-6,500 feet; flowers May - June.	None. No potential habitat. Known populations occur outside of the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.
Clay reed-mustard *Schoenocrambe argillacea*	T	Grows in steep, nearly inaccessible sites such as are unlikely to have been altered much by recent human activity, sc.: narrow ledges and overhangs of steep, north-facing slopes, often in somewhat protected nooks, crevices and cavities. Preferred soils are usually clayey sand derived from shales and sandstones in the contact zone of the Uinta and Green River Formations. It has also been reported growing on soils rich in gypsum, and on the Evacuation Creek Member of the Green River Formation.	None. No potential habitat. Known populations occur south and outside of the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.
Gibben's penstemon *Penstemon gibbensii*	S	Shaly slopes and bluffs along the Green River, with mixed desert shrubs and scattered juniper; 5,500 to 7,700 feet; flowers June.	None. Species is endemic to Daggett County and does not occur near Project Area.	Yes. Project Area does not occur in species range.
Goodrich's blazingstar *Mentzelia goodrichii*	S	Steep, white, calciferous shale cliffs of the Green River Formation; escarpments of Willow & Argyle Canyons; open mountain brush communities; 8,100-8,800 feet.; flowers July - August.	Moderate. Formation and associated soils occur in the Project Area. However, little is known about the species' exact habitat requirements	Yes. Project Area does not occur in elevation range.
Goodrich's columbine *Aquilegia scopulorum var. goodrichii*	S	Green River shale ridges; bristlecone pine, limber pine, Salina wildrye, mountain mahogany, pinyon, and Douglas-fir communities; 7,400 to 9,400 feet	Moderate. Formation and associated soils occur in the Project Area. However, little is known about the species' exact habitat requirements	Yes. Project Area does not occur in elevation range.

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Goodrich's penstemon *Penstemon goodrichii*	S	Duchesne and Uintah County, near Lapoint, Tridell, Whiterocks; Duchesne River Formation; clay badlands; desert shrub, shadscale, pinyon-juniper or mountain brush communities; 5,590-6,215 feet.; flowers late May - June.	None. No potential habitat. Known populations occur in northern Uintah County; outside of the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.
Goodrich cleomella *Cleomella palmeriana* var. *goodrichii*	S	Morrison Formation, heavy clay; mat-salt-bush, Cicsco woody aster, salt desert shrub community; 4,000-6,000 feet; flowers May.	None. No potential habitat. The geological formation and soils associated with this species do not occur in the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.
Graham's catseye *Cryptantha grahamii*	S	Green River Formation shale in mixed desert shrub, sagebrush, pinyon-juniper, and mountain brush communities; 5,000-7,400 feet.	Moderate. Formation and associated soils occur in the Project Area. However, little is known about the species' exact habitat requirements	No. Potential habitat occurs in the Project Area.
Graham's beardtongue (Graham's penstemon) *Penstemon grahamii*	P	Grows directly on the weathered exposures of oil-shale strata associated with the Parachute Creek Member and Evacuation Creek Member of the Green River Formation. Oil shale or white shale knolls & talus; semi-barren mixed desert shrub or pinyon-juniper communities; 4,600-6,700 feet; flowers from late May - mid-June.	Low. The geological formation and soils associated with this species does not occur. Known populations are located south and east of the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.
Green River greenthread *Thelesperma caespitosum*	S	White shale benches and windswept slopes of the Green River and Uinta Formation with pinyon-juniper and mountain mahogany communities;. 5,900–8,400 feet.	Moderate. Formation and associated soils occur in the Project Area. However, little is known about the species' exact habitat requirements.	No. Potential habitat occurs in the Project Area.
Hamilton milkvetch *Astragalus hamiltonii*	S	Duchesne River, Mowry, Dakota & Wasatch Formations; mixed desert shrub or pinyon-juniper communities; 5,240-5,800 feet; flowers May-June.	None. No populations, potential or suitable habitat occurs for this species in this area. Known populations occur near Vernal; outside of the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.
Horseshoe milkvetch *Astragalus equisolensis*	S	East of Green River, Horseshoe Bend; Duchesne River Formation soils; mixed desert shrub communities; 4,790-5,185 feet.; flowers May-early June.	None. No populations, potential or suitable habitat occurs for this species in this area. Known populations occur along the upper Green River; outside of the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.
Huber's pepperplant *Lepidium huberi*	S	Uinta Mountain foothills, Book Cliffs; Chinle, Park City, Weber Formation; eroding cliffs, alluvium; black sage or mountain brush communities; 5,000-9,700 feet.; flowers June-August.	None. No potential habitat. The geological formation and soils associated with this species do not occur in the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.

Species	Status[1]	Habitat Association	Potential for Occurrence Within the Proposed Monument Butte Project Area and Cumulative Effects Area	Eliminated From Detailed Analysis? (Yes/No)
Park rock cress *Arabis vivariensis*	S	Weber Formation sandstone & limestone outcrops; mixed desert shrub or pinyon-juniper communities; 5,000-6,000 feet; flowers May.	None. The geological formation and soils associated with this species do not occur in the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.
Pariette cactus *Sclerocactus brevispinus*	T	Pariette Bench south of Myton, grows in flat soil surfaces to slightly rolling hills. Preferred soils are the fine alkaline clays overlain by a pavement of hard, flat, angular, desert-varnished sandstone fragments derived from the Wagonhound Member of the Uinta Formation; shadscale, mat-saltbush community; 4,700-5,400 feet.	High. The Project Area is located within the USFWS *Sclerocactus* polygon.	No. Suitable habitat is present in the Project Area.
Rock bitterweed *Hymenoxys lapidicola*	S	Blue Mountain; Weber Formation, sandy ledges & crevices; pinyon-juniper or ponderosa-manzanita communities; 5,700-8,100 feet; flowers June.	None. The geological formation and soils associated with this species do not occur in the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.
Shrubby reed-mustard *Schoencrambe suffrutescens*	E	Duchesne, Uintah: Green River Formation; Badlands Cliffs, Gray Knolls, Little Rock Pack Mountain; calcareous shale; mixed desert shrub, pinyon-juniper or mountain brush communities; 5,400-6,000 feet.; flowers late May - mid-August.	None. The geological formation and soils associated with this species do not occur. Known populations occur south and southeast of the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.
Sterile Yucca *Yucca sterilis*	S	Salt and mixed desert shrub communities growing in sandy soils, 4,800-5,800 feet.	Moderate. Formation and associated soils occur in the Project Area.	No. Potential habitat occurs in the Project Area.
Stemless penstemon *Penstemon acaulis var. acaulis*	S	Pinyon-juniper and sagebrush-grass communities on semi-barren substrates; 5,900-8,200 feet; flowers June-July.	None. Species is endemic to Daggett County and does not occur near Project Area.	Yes. Project Area does not occur in species range.
Uinta Basin hookless cactus *Sclerocactus wetlandicus*	T	Found within clay bad-lands all the way up into pinyon-juniper habitats. At the species core its preferred habitat seems to be Pleistocene outwash terraces with xeric, coarse-textured, alkaline soils overlain by a surficial pavement of large, smooth, rounded cobble. It occurs most commonly on south-facing exposures, where terrace deposits break from level slopes to steeper side slopes at approximately 30% grade, between 4,500-5,900 feet.	High. The Project Area is located within the USFWS *Sclerocactus* polygon.	No. Suitable habitat is present in the Project Area.

Species	Status[1]	Habitat Association	Potential for Occurrence Within the Proposed Monument Butte Project Area and Cumulative Effects Area	Eliminated From Detailed Analysis? (Yes/No)
Untermann daisy *Erigeron untermannii*	S	West Tavaputs Plateau; Green River, Uinta Formation; ridges; dry calcereaous shales and sandstones; pinyon-juniper or mountain brush communities; 7,000-9,400 feet. Flowers May–June.	Moderate. There are known populations in the vicinity of the Project Area within the Indian Canyon.	Yes. Project Area does not occur in elevation range.
Ute ladies'-tresses *Spiranthes diluvialis*	T	Green River tributaries, Uinta Mountains, Browns Park, Book Cliffs; unconsolidated alluvium; wetland meadow communities; 4,400-6,810 feet.; flowers late July - September	Low. No known populations exist in the Project Area, but potential habitat may occur in association with riparian areas.	No. Potential habitat may be present along riparian areas.
White River beardtongue *Penstemon scariosus* var. *albifluvis*	P	Grows on raw shale barrens and oil shale barrens of the Evacuation Creek and Para-chute Creek Member of the Green River Formation. Soils are xeric, calcareous, fine-textured, whitish or reddish clays overlain by a white shale chips; 5,000-6,800.	None. Known populations occur in the upper White River; east of the Project Area.	Yes. Potential habitat for this species does not occur in the Project Area.

[1] Status: E = Federally listed as endangered; T = Federally listed as threatened; P = Federal proposed species; S = BLM sensitive species, Vernal Field Office

Source: Adapted from BLM Vernal Field Office, Special Status Plant Species List (UDWR 2011b).
Source for location information: USFWS 2012, UNPS 2007, and Goodrich and Neese 1986.